

Argentine Notes. I. Papilionidae.

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Probably the height of every schoolboy collectors' ambition is to possess a "swallow-tail," at least it was in my school days, but although I was reputed to have more than my share of beginner's luck, it was never my fortune to obtain a specimen, nor in fact have I ever seen the British insect alive.

My first introduction to the Papilios was on the southern range of the Island of Cyprus, where a form of *P. machaon* (which is I believe known as ssp. *asiatica*), flies sparsely over the wild country below Platres, along the road to Troöditisa and on the bare summit of Troödos, the reputed "Olympus of the Gods." Its capture was more a matter of strategy and patience than a straightforward chase, as the nature of the ground prevented rapid movement. I captured a fair series, and every capture gave me a fresh thrill, possibly because they were my first Papilios, or it may have been their likeness to the British form of my schoolday dreams, then not so long left behind me.

But be it what may, they are the only members of their Family, whose capture has ever caused me the slightest elation. I suppose it is that they are mostly large and well known and rarely difficult to catch that this is so, but the fact remains that I get far more satisfaction out of the successful netting of a small dingy Hesperid, or an unusual *Pieris* than from the finest of Papilios.

In the only published list of the Argentine *Papilionidae* I have at hand, 49 species or forms are noted as occurring in the country, but the list must be slightly longer since there are species not mentioned, that I have seen or captured.

My first introduction to the Argentine species of this Family was in the Parks and Gardens of Buenos Aires, when I first landed, and where *P. thoas* ssp. *brasiliensis* flies commonly. This insect seems to be common in all parts of the country north of Buenos Aires, and at the moment of writing a pair are disporting themselves amongst the orange trees before the window, shadows of the "orange dogs" to follow. Some of them reach as much as 7 or 7½ inches wing spread, the males especially being generally on the large side.

From Buenos Aires I went almost immediately to the northern portion of the Province of Santa Fé, a province whose area exceeds that of Greece. Here I remained for 5½ years, collecting, when time permitted, in the vast quebracho forests that comprise the Chaco-santafecino.

The range of Papilios found here was not great and of these, three only were common. *P. thoas* ssp. *brasiliensis* haunted equally our gardens and the forest picadas,* and floated gracefully along the forest edge. The other two common species remained very closely in their selected haunts. Of these, *P. hellanichus*, generally considered a rare species and which is but sparsely represented in Argentine collections, favoured the woodland edge, seldom venturing far into the forest or straying to any great extent into the bordering cultivation. Like certain other insects, it was wont to resent the intrusion of other species into

* Forest paths or roads.

its domain, and would fly at them and buffet them in the most approved Charaxid-like style. As the earlier stages appeared to be unknown, I decided to find their larvae, but although the adult was so common and so localized that it appeared an easy task, nearly three years was to elapse before I achieved my end and then only by spending many hours watching the insects in flight till they finally betrayed their food-plant, a not uncommon but little suspected *Berberis* (*B. ruscifolia*). I have since learnt that *Papilio argentinus* also feeds on a *Berberis* sp.

Papilio perrhebus, on the other hand, was always to be found in the flower covered glades along the rivers, especially in the spring, when the scent of the wild petunias was almost suffocating. It is an insect twelve years' collecting has led me to associate with the vicinity of rivers. It flies freely in the virgin forest at Punta Lara to the south of the city of Buenos Aires, a stretch of woodland that has miraculously escaped the vandal hand of man where many unusual species have been found, brought down from Paraguay and Brazil on the floating camalotes by the two great waterways of the country, the Paraná and the Uruguay. In Misiones and Corrientes I have only found it along the banks of the Alto Paraná or by the larger arroyos,* and in Entre Rios the riverine forests are its home.

Of the remaining species that I took in the Chaco-santafecino, all were scarce. I do not remember taking the male of *L. lycophron* but it must have been present since one or two specimens of the female forms *oebalus* and *pirithous* were captured. The *pomponius* form of *P. lysithous* was also found and *Euryades duponcheli*, the former unrecorded I believe from this country.

Then after a short time in Buenos Aires, whose bricks and mortar were far from my liking, I found myself in the Province of La Rioja (equal in area to Portugal), and here I was able to collect freely without the restraint of Office hours.

Undoubtedly the commonest of the Papilios in the north west is the elsewhere scarce *Euryades duponcheli*. It is a beautiful insect and in the summer of 1930-31 it was excessively common both at Guayapa (near Patquia) and in the small area of cultivation that nestles amongst the Mogotes, those curious sandstone cliffs and canyons that form the southern extension of the small range of sierras known as Los Colorados. Amongst these sandstone valleys, filled with scrub and the giant candelabra cactus, I spent many pleasant days collecting insects and cacti, or searching for a lost Indian burial ground. Apart from the rare Chaco-santafecina records, I have only seen *E. duponcheli* (excluding the northwestern provinces) at a spot on the Rio Lujan, an hour's train journey north of Buenos Aires, where I found it not uncommonly in March of 1930, finding at the same time the *damocrates* form of *P. perrhebus*. The foodplant of *E. duponcheli* is *Aristolochia lingua*.

Rare specimens of *Euryades corethrus* are sometimes taken, and in the villages or towns, where there happen to be Citrus plants, or flowers, one sees the ubiquitous *brasiliensis*. *P. polydamas* is not uncommon and I have taken it as high as 7500 feet in the Nevado de Famatina on the Cerro Negro Oveno. Most of my collecting in La Rioja and in the adjacent portions of the surrounding Provinces, San Juan, San Luis, Córdoba and Catamarca has been off the beaten track, and in the

* Small streams.

wilder portion, where *Papilionidae* are less likely to be found, and I think the only other species I took in those parts was *damocrates* though I believe that five or six other species are to be found. During the summer of 1933-34 I spent six months collecting in my old haunts of the Chaco-santafecino, along the north of Corrientes and the Alto Paraná litoral of Misiones. It happened to be one of the worst seasons ever recorded here, due to the excessive cold of the previous winter, followed by prolonged drought. My stay of a month in the Chaco-santafecino did not produce a single *Papilio*, though I searched assiduously for *P. hellanichus* in its favourite haunts. In Corrientes only two species were to be found, and it was not till I entered Misiones at Posadas that the season began to wake up. Here in some woodland bordering the river I had the pleasure of making my acquaintance in the life with several well known butterflies and three *Papilios*, *polydamas*, *perrhebus* and *lamarckei* were taken, and another unknown to me, probably *P. capys*, successfully evaded every attempt to capture it, confining itself to the denser woodland, where the net could not be used.

Later on in the more northern portions of the Territory and on the Brazilian borders, the *Papilios* became some of the commonest insects. In all 19 forms were taken and on one occasion at Puerto Bemberg, where the road through the villages was in places lined with beds of zinias and other flowers, no less than ten forms were present at the same time at one of these beds, including the rare *P. scamander*, of which I only obtained three specimens in all.

Here on these flowerbeds was variety, but on the damp sand along the river's bank, on the muddy patches by the arroyos, and sometimes after rain at the puddles on the roads, was quantity. On sunny days from about ten in the morning till late afternoon *P. thoas* ssp. *brasiliensis*, *P. lamarckei*, *P. lycophron* and sometimes *P. androgeus*, clustered in dense masses of from a few inches to several feet in diameter, differing from the similarly grouped *Catopsilias* in that the species intermingled. Sometimes odd specimens of the beautiful *P. stenodesmus* would appear, or of *P. capys*. But whatever species were present all would be males. They would remain quiescent for a few minutes, their bodies throbbing as they sucked up the moisture, which was from time to time discharged from the anus in large drops, their wings erect, quivering with the slightest of movements. Now and again an insect would make an impatient gesture with its wings, a quick flip, withdraw its proboscis and move to another spot, or perhaps leave its fellows and taking to wing circle over the spot till it had spied out some new opening amongst the crowd, and dropping down walk around till it found a place that pleased it.

To collect from such patches, one had only to approach quietly, sit down, and select what was required with a pair of forceps.

I had hoped to obtain a long series of the beautiful diaphanous *P. protesilaus* group, of which four species are known from Misiones, *P. protesilaus*, *P. autosilaus*, *P. telesilaus* and *P. stenodesmus*. At times they assemble in patches, like the species just mentioned, but it was not my luck to see them thus. In fact only *P. stenodesmus* was taken, the rest, if seen, escaped (they cannot be distinguished on the wing and even at rest it is difficult), and I learnt from other collectors that they were absent from all their usual haunts that season.

At the foot of the Igazú falls, probably the most colourful falls in the world, stretching in a great semicircle for 2700 metres and falling either directly, or as a double fall for 263 feet in a green setting of tropical forest, the beautiful *P. nephalion* flew in the spray-drenched forest, whilst in the drier forest above, the *rurik* form of *P. lysithous* was found, and a single specimen of the form *brevifasciata*.

Both the female forms *oebalus* and *pirithous* of *lycophron* flew together in numbers early in December, whilst probably the commonest of the *Papilio*s throughout the season was *P. hectorides*. *P. polystictus* was also not rare, but *P. laodocus* was never very plentiful except for a few days on a flower patch on the main picada between Puerto Aguirre and Puerto Iguazú. A few *P. anchisiades* were also taken.

Early Stages of Indian Lepidoptera.

By D. G. SEVASTOPULO, F.R.E.S.

(Continued from Vol. XLVIII., p. 100.)

SPHINGIDAE.

Rhyncholaba acteus, Cr.

Ovum.—Yellow green, ovoid and small for the size of the insect. Hatched 25.ix.31.

1st instar.—Head yellow-green, body blue-green. Horn thin, about half the length of the body, black with yellow base. Moulded 27.ix.31.

2nd. instar.—Head yellow-green, body blue-green. A large white subdorsal spot on the 4th somite and a series of smaller oval white spots outlined in dark blue from the 5th to the 10th somite, the posterior spots being less conspicuous than the anterior. Horn as in previous instar. The thoracic somites begin to assume the typical tapering Choerocampid shape. Moulded 29.ix.31.

3rd instar.—Very similar to the previous one. The spot on the 4th somite develops a dark pupil. The base of the horn orange. Moulded 1.x.31.

4th instar.—Head blue-green. True legs orange-pink. Body blue-green. Thoracic somites tapered with a dark dorsal and a pale subdorsal line. 4th somite bearing a subdorsal ocellus consisting of a yellow-green ring edged internally and externally with white containing an indigo blue spot anteriorly, the posterior portion being bright green dotted with white. A series of seven indistinct oblique white lateral stripes. A series of six elongated yellow subdorsal spots outlined with dark blue from the 5th to the 10th somite. Horn about half an inch long, the base orange followed by a narrow black, a wide white and a wide black ring, the tip white. The whole carried erect and curved slightly forward. Moulded 3.x.31.

Final instar.—Similar to the previous one except that the horn is orange-pink, short, thick and curved downwards. Pupated in a slight web among leaves on the surface of the ground 8.x.31.

Pupa.—Brown with a dark dorsal line and lateral stripes. Ventral surface white, a black central and two dark brown lateral stripes. Wing cases pinkish-brown the edges darker. Tongue case free and circular. A male emerged 20.x.31.

Foodplant.—*Caladium*.

Described from a batch of six larvae from ova found in Calcutta. Of these, one assumed a pinkish ground colour after the first ecdysis,